

REMARKS/ARGUMENTS

This Amendment is submitted prior to continued examination of the present application and in response to the final Office Action issued August 18, 2008. Claims 19, 20, 25-38, 41, 43, 45, 46, 48, 49, and 51 were pending in the application. Claims 25-34, 36, and 38 were previously withdrawn. In the Office Action, claims 19, 20, 35, 37, 41, 43, 45, 46, 48, 49, and 51 were rejected. In this Amendment, claims 19, 20, 35, 37, 43, 45, 46, 48, 49, and 51 have been amended. Claim 41 has been canceled. No new matter has been added. Claims 19, 20, 35, 37, 43, 45, 46, 48, 49, and 51 thus remain for consideration.

Applicants submit that claims 19, 20, 35, 37, 43, 45, 46, 48, 49, and 51 are in condition for allowance and request withdrawal of the rejections in light of the following remarks.

Specification

The specification is objected to as failing to provide proper antecedent basis for the subject matter in claims 19, 35, and 37. Claims 19, 35, and 37 has been amended to recite:

wherein said index adding means adds the address including at least one of an address in said hard disk drive in which a just-previous block has been recorded, an address in said hard disk drive in which a current block is recorded, and an address in said hard disk drive in which a just-subsequent block is recorded.

The amended claim clarifies that the index adding means adds "at least one of" the three addresses listed to respective blocks. Supporting disclosure may be found in the specification, for example, at Fig. 5 and page 20, line 26 through page 21, line 3.

In view of the above, Applicants respectfully submit

that proper antecedent basis is present in the specification for claims 19, 35, and 37. Thus, Applicants request that the objection to the specification be withdrawn.

Claim Objections

Claims 19, 20, 35, 37, 41, 43, 45, 46, 48, 49, and 51 are objected to for informalities. In response to these objections, each of claims 19, 20, 35, 37, 41, 43, 45, 46, 48, 49, and 51 has been amended in accordance with the suggestions of the Examiner. Accordingly, Applicants respectfully request that the objections to claims 19, 20, 35, 37, 41, 43, 45, 46, 48, 49, and 51 be withdrawn.

§112 Rejections

Claims 19, 20, 35, 37, 41, 43, 45-46, 48-49, and 51 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the enablement requirement. However, the Examiner only addresses claims 19, 35, and 37. Specifically, the Examiner asserts that the specification does not support the "control means" for controlling reception of a packet stream and "a central processing unit" to be different entities. Claim 19 has been amended to recite "receiving means for receiving a stream constructed by packets of a predetermined format under control of a central processing unit." Supporting disclosure may be found at least in Fig. 2 and the accompanying description. Claims 35 and 37 have been similarly clarified. Accordingly, Applicants respectfully submit that claims 19, 35, and 37, and any claims depending therefrom, properly accord with the enablement requirement. Thus, Applicants respectfully request that the rejection of claims 19, 20, 35, 37, 43, 45-46, 48-49, and 51 for lacking enablement be withdrawn.

Claims 19, 20, 35, 37, 41, 43, 45-46, 48-49, and 51 are rejected under 35 U.S.C. §112, first paragraph, as failing to comply with the written description requirement. In explanation of this rejection, the Examiner merely refers to the

enablement rejection above. Accordingly, for at least the reasons discussed above, Applicants respectfully submit that claims 19, 20, 35, 37, 41, 43, 45-46, 48-49, and 51 are patentable, and therefore request that their rejections be withdrawn.

Claims 19, 20, 35, 37, 41, 43, 45-46, 48-49, and 51 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to point out and distinctly claim the subject matter which applicant regards as the invention. Claim 19 has been amended to clarify the limitations alleged to be indefinite by the Examiner. Claims 35 and 37 have been similarly amended. Accordingly, Applicants respectfully submit that claims 19, 35, and 37, and the claims depending therefrom, are patentable under §112, second paragraph. Thus, Applicants request that the rejections of claims 19, 20, 35, 37, 43, 45-46, 48-49, and 51 for indefiniteness be withdrawn.

The Examiner requested a mapping of the limitations recited in lines 29-47 of claim 19. After amendment of claim 19, the only remaining "means" limitation in the cited portion appears to be "address determining means." The specification teaches, for example, a Logical Base Address (LBA) determining unit 104 and an LBA determining circuit 136. (*Specification*, Fig 5; p.21 ll.15-18; p.23 ll.14-15).

Double Patenting

Claim 41 is objected to under 37 CFR 1.75 as being a substantial duplicate of claim 43. Claim 41 has been canceled, thereby obviating this objection.

§103 Rejections

Claims 19, 20, 35, 37, 41, 43, 45, 46, 48, 49, and 51 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Applicant Admitted Prior Art (AAPA) in view of U.S. Patent No. 5,881,248 to Mergard ("Mergard") and further in view of U.S. Patent No. 6,401,149 to Dennin et al. ("Dennin").

Claim 19 recites:

an arbiter for mediating said packets extracted by said extracting means and stored in said memory means, and for mediating said packets outputted from said memory means to said index adding means in response to an instruction from said memory control means;

The Examiner asserts that such limitation is met by AAPA. In explaining this assertion, the Examiner equates the arbiter with the controller (28) of Fig. 1. (8/18/08 Office Action, p.9). However, the Examiner also equates the "memory control means" with the controller (28) of Fig. 1. (*Id.* at p.8). Clearly, based on the language of the claims, these cannot be the same unit. Particularly, because the arbiter is used "for mediating said packets outputted from said memory means. . . in response to an instruction from said memory control means," it is clear that the arbiter and the memory control means are separate units. That is, one unit cannot provide instructions to itself. Thus, AAPA fails to teach such an arbiter. Moreover, neither Mergard nor Dennin cures this deficiency.

Claim 19 further recites:

packets transferring control means for permitting write of said packets outputted from said index adding means to said hard disk drive in accordance with said command from said memory control means, wherein said packets transferring control means includes address determining means for starting updating an address of said hard disk when said start address is inputted from said memory control means by counting up said address of said memory means each time packets of a predetermined data amount are transferred, and setting address information for the transferred packets of the predetermined data amount; and

wherein said index adding means adds the address including at least one of an

address in said hard disk drive in which a just-previous block has been recorded, an address in said hard disk drive in which a current block is recorded, and an address in said hard disk drive in which a just-subsequent block is recorded; and

wherein said address determining means has an internal counter for automatically setting said address information.

The Examiner baldly asserts that such limitations would have been obvious due to the implicit characteristics of a DMA controller. However, the Examiner fails to provide any explanation of how such limitations are met by a DMA controller, or any prior art references demonstrating such features of a DMA controller. Such characteristics of a DMA controller are not discussed in AAPA, Mergard, or Dennin, taken alone or in combination. Therefore, Applicants respectfully submit that such limitations serve as another basis for the patentability of claim 19.

Moreover, the Examiner admits that AAPA fails to teach the index adding means "residing outside a central processing unit." (8/18/08 Office Action, p.10). However, the Examiner attempts to cure this deficiency by simply stating, without support, that it was known to shift functions performed by a CPU to dedicated hardware. Applicants respectfully submit that such an unsupported statement is an insufficient basis for rejection.

As an alternative basis for rejection, the Examiner contends that Dennin teaches a DMA controller integrated with a memory control means, thus allowing for higher bandwidth transfer. (8/18/08 Office Action, p.11). This argument assumes that Dennin teaches a DMA controller including an index adding means. No such disclosure is present in Dennin. Further, even accepting that Dennin teaches such a DMA controller, it still fails to meet the limitations of claim 19. Particularly, claim 19 specifically recites that the index adding means adds "at

least one of an address in said hard disk drive in which a just-previous block has been recorded, an address in said hard disk drive in which a current block is recorded, and an address in said hard disk drive in which a just-subsequent block is recorded." While Dennin may teach a different method of high performance data transfer, any different method of effecting the high performance transfer is not prior art. Rather, the specific limitations of the claim must be taught. These specific limitations are not taught, or even alleged to be taught, by AAPA, Mergard, or Dennin, either expressly or inherently.

For at least the reasons discussed above, Applicants respectfully submit that claim 19 is patentable over AAPA, Mergard, and Dennin, taken alone or in combination. Therefore, Applicants respectfully request that the rejection of claim 19 be withdrawn.

Independent claims 35 and 37 include similar limitations to those discussed above in connection with claim 19. Thus for at least these reasons, Applicants respectfully submit that claims 35 and 37 are also patentable. Accordingly, Applicants request that the rejections of claims 35 and 37 be withdrawn.

Claims 20, 43, 45, 46, 48, 49, and 51 depend from and therefore include the limitations of one of independent claims 19, 35, and 37 discussed above. Thus, for at least the reasons discussed above in connection with claims 19, 35, and 37, Applicants respectfully submit that claims 20, 43, 45, 46, 48, 49, and 51 are patentable under §103, and request that their rejections be withdrawn.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to withdraw the outstanding rejection of

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the claims and to pass this application to issue. If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he/she telephone Applicant's Attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested Amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

Dated: December 16, 2008

Respectfully submitted,

By 

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